

Satisfiability of Equality Equations [\(View\)](#)

You are given an array of strings `equations` that represent relationships between variables where each string `equations[i]` is of length 4 and takes one of two different forms: "`xi==yi`" or "`xi!=yi`". Here, `xi` and `yi` are lowercase letters (not necessarily different) that represent one-letter variable names.

Return `true` if it is possible to assign integers to variable names so as to satisfy all the given equations, or `false` otherwise.

Example 1:

Input: `equations = ["a==b","b!=a"]`

Output: `false`

Explanation: If we assign say, `a = 1` and `b = 1`, then the first equation is satisfied, but not the second.

There is no way to assign the variables to satisfy both equations.

Example 2:

Input: `equations = ["b==a","a==b"]`

Output: `true`

Explanation: We could assign `a = 1` and `b = 1` to satisfy both equations.

Constraints:

- `1 <= equations.length <= 500`
- `equations[i].length == 4`
- `equations[i][0]` is a lowercase letter.
- `equations[i][1]` is either `'='` or `'!'`.
- `equations[i][2]` is `'='`.
- `equations[i][3]` is a lowercase letter.